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AMATEUR RADIO  
STATION W60TX

VOL. XIX

1975

# PAARA GRAPHS

PALO ALTO AMATEUR RADIO ASSOCIATION, INC.

MENLO PARK CIVIL DEFENSE RADIO CLUB, K6YQT

*Aug. 75*

OUR NEXT MEETING: will be what was originally scheduled for our last meeting. It's on Firday, August 1, 1975, in our usual Menlo Park Recreation Center. It's located near the Menlo Park Police Department and the Library. Time is usually about 7:30 pm sharp.

THE PROGRAM: This will be the meeting for DX'ers, QRO folk, and other high-power nuts. We've got Merle Parten, K6DC, an employee of Eimac, to tell us about new tubes and tube technology, especially in the RF power amplifier application. There is a good chance that some free goodies will be brought to the meeting, courtesy Eimac. Come and learn about how your new linear design could be optimized with the right tube.

Coffee Tea Raffle Cookies Eyeball QSO's Good Gonk  
 \*\*\*---Everyone Invited---\*\*\*

-----:!:!:!:!:-----

The PAARA Board of Directors meets on the usual Wednesday after the meeting, on August 6, 1975, at 7:30 pm in the PAARA W6OTX trailer. This monument to man's better days is located in the SRI parking lot, at 333 Ravenswood avenue, in Menlo Park. Be nice to the guard and they may even let you in. Come discuss our future.

\*\*\*-----\*\*\*

The PAARA net fondles the frequency of 145.25 MHz AM on monday nites at around 8:07 PM. This net is mainly for ragchewing, and for determining how many times VE3FZK/W6 can yell "Break" into his overmodulated Two'er in one evening. PAARA has also established 147.45 MHz as their official FM simplex frequency, and several members are already on with infamous ICOMs, Gronky GE's, and greasy Goonies. No set time has been determined, but Monday nite would be a good time to try out your FM gear with PAARA.

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IN THIS ISSUE: Hot News on the PAARA \$18,997.72¢ Sweepstakes, the 4th of July Parade, and a genuine serious notice about the editorial guidance of this newsletter.

\*\*\*\*\*

Ed Falbanks, W6AIN, suggests we call PAARA a new name:  
Palo Alto Menlo Park Electronic & Radio Society ---  
PAMPERS!

PAARAGRAPHS IS THE OFFICIAL ORGAN OF THE PALO ALTO AMATEUR  
RADIO ASSN., AND THE MENLO PARK CD RADIO CLUB.

VOLUME 19

NUMBER 8

AUGUST 1975

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-----:~::~:-----

--PAARAGRAPHS STAFF AND RELATED PERSONAGES--

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SEND YOUR ARTICLES, COMMENTS, PROJECTS, NEWS, EXCITING

EVENTS, OR OTHER GOOD GONK TO: RICK FERRANTI WA6NCX,

1234 SANTA CRUZ AVENUE, MENLO PARK, CALIF. 94025

(415) 324-1539

PAARA PICKIN'S - GOOD STUFF TO KNOW

Found: in the Novice tent on Field Day, up there on the Hill. Clip on type dark glasses, approximately rectangular. If they are yours, drop a line to PAARA, box 911, Menlo Park 94025.

\*\*\*\*-\*\*\*\*\*

New Novice, WN6MDX, seeks good used QRP gear, preferably Heathkit HW-7, or equivalent, but will consider HW-16. Call Max Bart, at 266-6126, San Jose, Evenings.

\*\*\*\*-\*\*\*\*\*

Achtung! For sale: APR-1 Rcvr. Has plug-in units for 40-90 mHz and 74-300 mHz, in working condition. Receives am, wide or narrow FM, and all kinds of stuff in between. \$35.00 or best offer.

Alles Looken Peepers!

Desperately need a manual for a kluge Collins 32V1 Would like to purchase or borrow for Xerox.

ON the above: Call Paul Thekan WN6IJP, at 369-4034.

\*\*\*-\*\*\*\*\*

Japanese Ham Radio: (tokyo||AP) Japan has replaced the United States as the world's ham radio capital.

The number of ham stations in Japan rose to 286,247 in March, the Postal and Telecommunications Ministry reported yesterday, surpassing the U.S. total of just over 278,000. (S.F. Chronicle, June 24, 1975)

\*\*\*\*-\*\*\*\*\*

Hal Moore reports that the res lts of the Simulated Emergency Test held last January are published on pages 57 through 62 of the July issue of QST. We were the highest in the Santa Clara Valley section, in fact, in the whole Pacific Division. Down South, Orange, Santa Barbara, and San diego Counties had higher scores than ours. PAARA wins again.

\*\*\*\*\*-\*\*\*\*\*

#### FIELD DAY SCORES AND CONTACTS:

20/80 meters SSB: 659 contacts

15/40 meters SSB: 665 contacts

Novices: 112 contacts

All band CW: 468 contacts

VHF stations: 100+ contacts

AND we got all possible bonus points to boot! Thanks to all who came!



## REPORT OF THE BOARD OF DIRECTORS MEETING, JULY 16, 1975

\*\*\*\*\*\_\*\*\*\*\*

Present were Paul Thekan, Fred Canham, Hal Moore, Jerry tucker, Bob Baum, and Rick Ferranti.

First business we attended to was selecting a new volunteer for the editorship of the paper, PAARAGRAPHS. Hal Moore volunteered for the job after the present editor decided to end his position as editor.

There was a work party on Saturday, July 19, to erect a new antenna and tower on the Steam plant at SRI. Hopefully everything went well.

Paul Thekan volunteered to look for some more of the weird connectors we have on our emergency generator powered cables. He will try to find them at some thoughtfully priced surplus junk store in our area.

\*\*\*-\_-\_-\_-\*\*\*

We got a couple of new members for our club:

Steve Goldberg, WAØYKI, advanced class. He lives in Sunnyvale on 1228 w. McKinley, 94086.

Eric Edberg, W6DU, an extra class licensee who was a member of PAARA way back in the 1950's. Lives at 461 Heather Ct., in Los Altos, 94022.

Welcome to the club -- hope you enjoy the fun at PAARA.

\*\*\*-\_-\_-\*\*\*

DON'T LET YOUR LICENSE EXPIRE!

With the impending license restructuring, it is particularly important that you at least maintain your present license in good order. This would be an excellent time to take advantage of the free offer announced in AUTO\*CALL Magazine.

The License Expiration Notice service will keep track of your license expiration date and remind you in advance. Note the expiration date on a self-addressed stamped envelope and send it to Joan Machinchick, K3KBI, 1023 Lake Clair Dr., RFD 4, Annapolis, Maryland 21401.

de the CCRC Circle.

\*\*\*-\_-\_-\_-\*\*\*

Many thanks to our last speaker for a talk on STARPAHC, the mobile Indian health improvement system. A very interesting look at present-day radio technology.

4TH OF JULY REPORT \*\*\* A REPORT OF THE INDEPENDENCE DAY  
PARADE IN REDWOOD CITY, CALIFORNIA. DE HAL W6DEF....

\*\*\*\*\*

An Estimated 100,000 people lined the streets in Redwood city to see the annual Independence day parade. The Peninsula Celebrations Association is the sponsor of the three parades held each year. The Redwood City Civil Defense and Disaster Communications Service (W6WWJ) has furnished communications for this parade for at least 12 years. This year sixteen Amateur Radio operators participated. K6ANN is the Radio Officer and he with K6DRN manned the control station W6WWJ at the Staging area. We used Races procedure. There were nine units and one rover. Each reviewing stand along the parade route had one portable station and the public address system announcer and the judges were kept informed of the changes in the parade. With over 200 units in the 5 divisions there were a numbe of "scratches" as well as changes of position. The usual lost children were relocated with their parents. (This always happens.) This year we helped TV channel 14 keep abreast of the changes. They were taping the entire parade with verbal commentary for showing on TV on 8:30 pm on July 4. Four times the microphone at the main reviewing stand was turned over to parade officials for ironing out difficulties in the assembly of the proper papers for the judges. Headphones had to be used at all times because of the noise of the passing bands and the crowds. It was an enjoyable exercise and we are happy to be part of this civic enterprize.

From Hal Moore W6DEF  
Emergency Coodinator, Redwood City and  
Menlo Park Area for the ARRL.

\*\*\*\*\*

DID you know that the club has a  $7\frac{1}{2}$  kilowatt gasoline generator for emergency power? It is in first class shape and is available for Field Day, the SET, and any other similar occasion of otherwise ilk. (???)

The Following is an article from the MDARC CARRIER, an excellent treatment of ni-cads by Art Mayoff.

\*\*\*\*\*-----\*\*\*\*\*

### THE NICKEL-CADMIUM CELL

Have you ever had a set of ni-cads you thought were bad?

Ever thought your ni-cads were not up to snuff? Many of us have thrown our ni-cads because we figured they were bad after giving them a complete recharging. The following info might shed some light as to whether that ni-cad is actually bad or just has a case of bad memory.

#### The Battery:

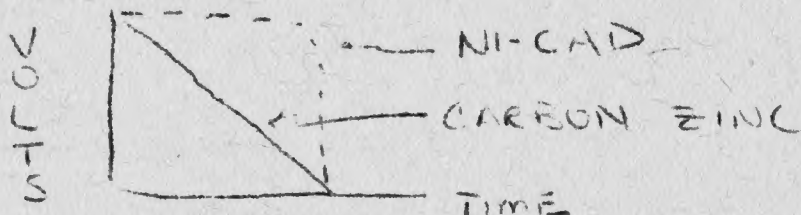
The ni-cad is the abbreviated name for the nickel-cadmium cell and is derived from the electrode materials.

In the ni-cad cell, the positive plate is made of nickel hydroxide and the negative plate is of cadmium. During the charge cycle, the nickel hydroxide gives up electrons, changes valence, and acquires a positive charge with respect to the cadmium plate. During the discharge cycle, the nickel hydroxide acquires electrons from the cadmium plate as it oxidizes to form cadmium hydroxide. This process results in no physical change in the plates.

#### Voltage Characteristics:

Ni cad cells, though rated at 1.2 volts, actually have voltages ranging from 1.2 to 1.3 volts.

The nicad has an unusual discharge curve in relation to the carbon zinc cell, so familiar to all of us. The following graph shows the discharge of a ni-cad versus the carbon-zinc cell.



It is important to see that the ni-cad remains at its initial voltage level almost until it is completely discharged. Thus there is little advanced warning to the user that the batteries are near the end of their charged capacity.

(con't...\*)

## NI-CADS AND YOU con't....

The ni-cad cell, due to its chemical makeup, has a unique and deceiving characteristic sometimes called a memory. The memory effect causes the cell to become programmed by a repetitious charge-discharge cycle. A ni-cad which is used in a consistent pattern of cycling over an extended period of time will act as if it is totally discharged after its usual use period is over even if it has a greater potential.

To erase a ni-cad's memory, apply a full charge (16 hours), then discharge through a 250 ohm, 2 watt load for 8 hours. Batteries usually require that this process be repeated 3 times before normal performance can be expected. If normal performance does not resume, the battery should be replaced.

The memory effect also applies to the discharge state. A ni-cad may be stored for an extended period of time with no permanent damage. However it will develop a programmed acceptance of this discharged state on the cells and will require that its memory be removed before it will perform correctly. Again, apply 3 cycles of charge-discharge as above.

### Temperature EFFECTS:::

As with almost any cell, the Ni-cad is temperature sensitive. Temperature extremes can and will affect performance. The battery can be operated between plus 41 degrees F and plus 113 degrees F while being charged, and between minus 4 degrees F and plus 113 degrees F while being discharged. It should be remembered that during the charging process the ni-cad generates heat as all of the energy applied through the charger is not converted into useful energy.

Charging at higher ambient temperatures prevents proper charge capacity and reduces the useful life of the battery. Ni cads can be stored and kept at temperatures between minus 40 degrees F and plus 140 degrees F. However, battery life is shortened at temperatures above 70 degrees F. Extended charge at temperatures above 100 degrees F may also shorten battery life. The recommended charge temperature is 70 degrees F.

(charged to the next page)....



NI-CADS and other good stuff....

Summary:

Though ni-cads present unusual servicing problems, they can be successfully trouble-shot and used, if the above procedures are followed. A basic understanding is helpful. Also note that ni-cads work best when worked hard. Discharge until usable voltage is depleted and then recharge fully.

The above is a condensation of a Johnson Service Newsletter dated Feb. 20, 1975. It might be helpful to the FM folk who use ni-cads right and left in their Gonk.

\*\*\*\*-\*\*\*\*\*

THE PAARA \$18,997.72¢ SWEEPSTAKES !!!!!!!

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a tenth of a million years! Boffo. (not-  
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Yes! I want to enter the PAARA sweepstakes;;;here's  
32¢ and the answers to one of the following questions,  
in 27 words or less:

1. Summarize the plot of War and Peace.
2. What color are Harry Dannals eyeballs?
3. Does Wayne Green own a rototiller?
4. Prove that God exists.

Answer: \_\_\_\_\_

I understand that the opinion of the judges will be voiced  
when they feel like it (never sooner) and will be  
arbitrarily final. In case of a tie, the prettiest  
paper and nicest penmanship wins.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Zipper code: \_\_\_\_\_

- - - - -Cut along dotted line- - - - -

IMPORTANT NOTICE

Due to factors both within and without my control, it will no longer be possible for the present editor to continue writing, publishing, and printing PAARAGRAPHS. After doing this newsletter for the past 2 years and 3 months, several comments come to mind. First, it is painfully obvious that very few people give a hoot about the contents of our little paper. Seldom have I heard comments on articles (even the more humorous ones) or letters which I publish. This is rather discouraging, to say the least. The most infamous attitude is that people say that they have comments -- but I never see them written up for publication. Must I read minds? Secondly, there is a definite core of regular contributors. I thank Ed, Jerry, Paul, Hal, Terry, Andy, Lee, Gary, and the semi-anonymous writer (plus anyone else I may have missed) who have contributed so much. Contrary to what many club members think, writing an article or comment and dropping it to me through the mails is not an impossible feat.

In closing, I would like to thank my family -- especially my father -- for putting up with clanky mimeo machines, typewriters banging away at 1 AM (like now), greasy ink, and obtaining 500 lbs of dusty paper. Very special thanks go to Ed Fairbanks, who has been a continual source of good humor and encouragement, whether it be during Field day, at the meeting's coffee breaks, or at his monthly job of stapling this dumb rag together.

I have enjoyed my editing stint, and I regret that I must now end it. Good luck to Hal Moore who will be taking over this job in the future -- I hope he finds it as refreshing and creative as I have, but without the frustration.

Sincerely,

*Rick Ferranti*

Rick Ferranti WA6NCX

\*\*\*\*\*

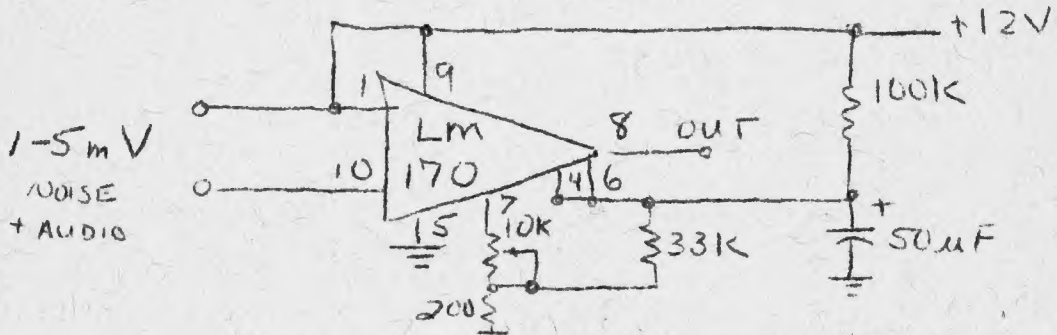
The U.S. Department of Commerce, Office of Telecommunications, has a pamphlet on Conserving Energy through use of Mobile Radio. Solve the energy crisis with 2 mtr FM!

# SIMPLE AUDIO AND SQUELCH CIRCUITS

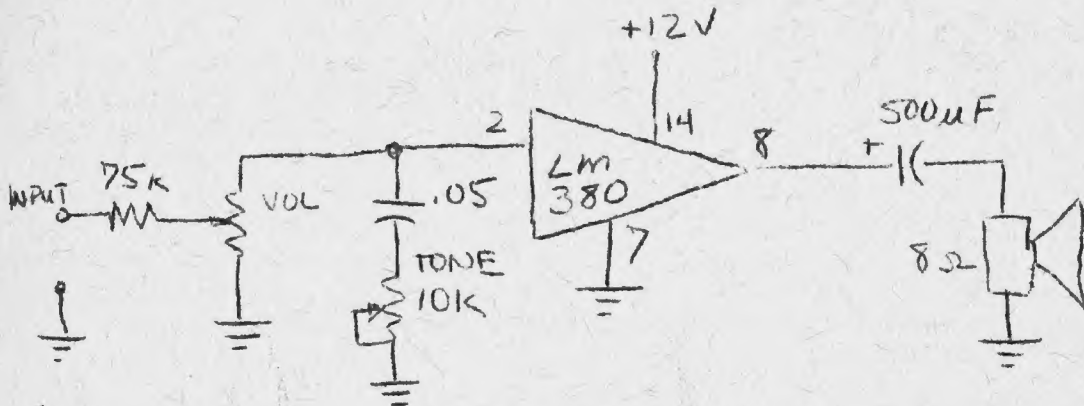
From the National Semiconductor Applications notes...

These circuits are quick and simple, and can replace older multi-component or vacuum tube junk. They are much cheaper -- and even better -- than ham type kits which try to do the same thing (yeah you VHF Eng.). Fun!

# SQUELCH

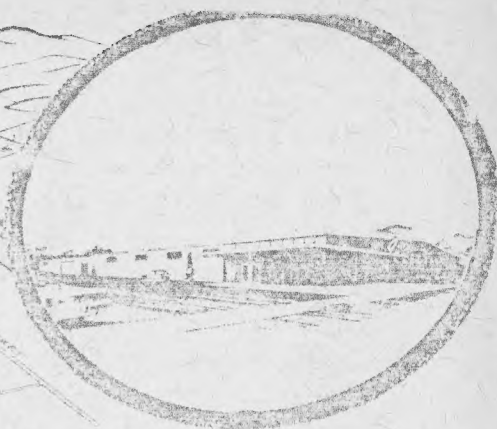
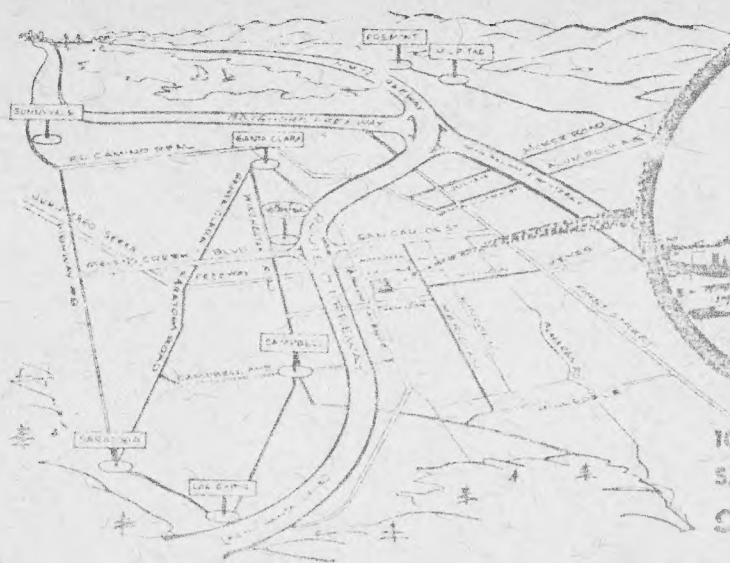


AUDIO AMP -- 2 WATTS and .1% THD!!



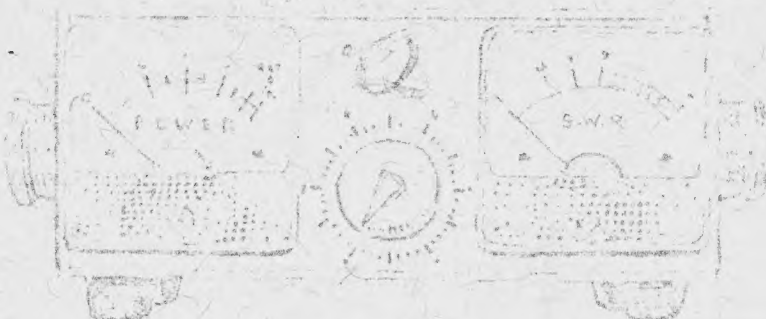
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This issue of PAARAGRAPHS was typed whilst listening to Ralph Vaughn Williams Symphony 3, the Pastoral, and Bach's Brandenburg Concerto #3. The perfect ending.



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